

Serial No.: 10/648,445
Attorney Docket No.: 10018579-1

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of selectively reading less than all information available at an output of an image sensor for which member-pixels of a subset of an entire set of pixels are individually addressable, the method comprising:

sampling information, at the output of the image sensor, representing a targeted member-pixel of the subset without having to read information representing the entire set of pixels; and

selectively reading information, at the output of the image sensor, representing another one or more but fewer than all member pixels of the entire set based upon the sampling information without having to read information representing all pixels on the image sensor; and

accessing a first set of sampling photo-sensing pixels of the image sensor and accessing a second set of non-sampling pixels of the image sensor, wherein the first and the second set of pixels have different physical circuitry addressing and control lines going to them, respectively.

2. (Previously Presented) The method of claim 1, further comprising:

reading information, at the output of the image sensor, representing member-pixels of the entire set that are located within a predetermined area adjacent to or surrounding the targeted member-pixel of the subset.

3. (Previously Presented) The method of claim 2, further comprising:
 - organizing the entire set of pixels into partitions, each partition having multiple pixels;
 - mapping one or more of the partitions one or more of the member-pixels of the subset, respectively;
 - reading information, at the output of the image sensor, representing all member-pixels of the subset so as to generate a plurality of samples;
 - handling the samples in a manner that preserves a relationship between each sample and corresponding member-pixel of the subset; and
 - reading information, at the output of the image sensor, representing one or more of the partitions mapped to the member-pixels of the subset but not all of the partitions based upon the plurality of samples.
4. (Previously Presented) The method of claim 1, further comprising:
 - determining if the sampling information exceeds a reference value; and
 - reading information, at the output of the image sensor, representing the one or more but fewer than all member-pixels of the entire set if the sampling information exceeds the reference value.
5. (Original) The method of claim 4, wherein the reference value represents one of a user-determined threshold or a saturation threshold for the targeted member-pixel of the subset.
6. (Previously Presented) The method of claim 4, further comprising:
 - reading information, at the output of the image sensor, representing all member-pixels of the subset so as to generate a plurality of samples, each member-pixel of the subset having a corresponding reference value, respectively;
 - applying the determining step to each of the samples; and
 - reading information, at the output of the image sensor, representing the one or more but fewer than all member-pixels of the entire set located within a predetermined area adjacent to or surrounding member-pixels for which the corresponding sample exceeds the respective reference value.

Serial No.: 10/648,445
Attorney Docket No.: 10018579-1

7. (Previously Presented) The method of claim 4, wherein:
the sampling information is the current sampling information and the reference value is a first reference value; and
the method further comprises:
taking the difference between the current sampling information and the first reference value; and
reading, at the output of the image sensor, information representing the one or more but fewer than all member-pixels of the entire set if the difference exceeds a second reference value.
8. (Original) The method of claim 7, wherein the first reference value is the previous sampling information, respectively.
9. (Original) The method of claim 7, further comprising:
setting the first reference value to be equal to the current sampling information if the difference exceeds the second reference value.
10. (Previously Presented) The method of claim 1, further comprising:
measuring an elapsed time; and
reading information, at the output of the image sensor, representing all member-pixels of the subset if the elapsed time exceeds a predetermined amount.
11. (Previously Presented) The method of claim 10, further comprising:
measuring another instance of elapsed time upon reading information, at the output of the image sensor, representing all member-pixels of the subset.
12. (Original) The method of claim 1, wherein the image sensor is one of a CCD image sensor for which the subset is smaller than the entire set and a CMOS image sensor for which the subset is the same as the entire set.

Serial No.: 10/648,445
Attorney Docket No.: 10018579-1

13. (Currently Amended) A method of selectively reading data available at an output of an image sensor, the method comprising:
- reading less than all data available at the output of the image sensor for which selected ones but not all of the entire set of pixels are individually addressable; and
 - accessing a first set of sampling photo-sensing pixels of the image sensor and
 - accessing a second set of non-sampling pixels of the image sensor, wherein the first
 - and the second set of pixels have different physical circuitry addressing and control
 - lines going to them, respectively.
14. (Previously Presented) The method of claim 13, further comprising:
- organizing the image sensor into a matrix of partitions, each partition including a member-pixel of the subset referred to as a sampling pixel;
 - sampling data, at the output of the image sensor, representing a sampling pixel without having to read information representing the other pixels in the corresponding partition; and
 - selectively reading data, at the output of the image sensor, representing at least the entire corresponding partition but fewer than all of the partitions depending upon the sampled-data without having to read all of the pixels on the image sensor.
15. (Previously Presented) The method of claim 14, further comprising:
- reading data, at the output of the image sensor, representing partitions located within a predetermined area adjacent to or surrounding the sampling pixel.
16. (Previously Presented) The method of claim 14, further comprising:
- determining if the sampled-data exceeds a reference value; and
 - reading data, at the output of the image sensor, representing the one or more but fewer than all member-pixels of the entire set if the sampled-data exceeds the reference value.
17. (Original) The method of claim 16, wherein the reference value represents a saturation threshold for the targeted member-pixel of the subset.

Serial No.: 10/648,445
Attorney Docket No.: 10018579-1

18. (Previously Presented) The method of claim 16, wherein:
the sampled data is the currently sampled data and the reference value is a first reference value; and
the method further comprises
taking the difference between the currently sampled data and the first reference value, and
reading, at the output of the image sensor, information representing the one or more but fewer than all member-pixels of the entire set if the difference exceeds a second reference value.
19. (Original) The method of claim 18, wherein the first reference value is the previously sampled data, respectively.
20. (Original) The method of claim 18, further comprising:
setting the first reference value to be equal to the currently sampled data if the difference exceeds the second reference value.
21. (Previously Presented) The method of claim 14, further comprising:
measuring an elapsed time; and
reading data, at the output of the image sensor, representing all member-pixels of the entire set of pixels if the elapsed time exceeds a predetermined amount.
22. (Previously Presented) The method of claim 21, further comprising:
measuring another instance of elapsed time upon reading information, at the output of the image sensor, representing the entire set of pixels.
23. (Original) The method of claim 14, wherein the image sensor is one of a CCD Image sensor for which the subset is smaller than the entire set and a CMOS Image sensor for which the subset is the same as the entire set.

Serial No.: 10/648,445
Attorney Docket No.: 10013379-1

24. (Currently Amended) A digital camera comprising:
a pixel-differentiated image sensor for which member-pixels of a subset of the entire set of pixels are individually addressable, the image sensor being controllable to read less than all of the pixels without having to read all of the pixels; and
a processor operable to
obtain sampling information from a targeted member-pixel of the subset without having to read information from the entire set of pixels; and
selectively obtain information from another one or more but fewer than all member pixels of the entire set based upon the sampling information without having to read all of the pixels on the image sensor;
a first set of sampling photo-sensing pixels of the image sensor; and
a second set of non-sampling pixels of the image sensor;
wherein the first and the second set of pixels have different physical circuitry addressing and control lines going to them, respectively.

25. (Original) The digital camera of claim 24, wherein the processor is operable to selectively obtain information from member-pixels of the entire set that are located within a predetermined area adjacent to or surrounding the targeted member-pixel of the subset.

26. (Original) The digital camera of claim 25, wherein
the entire set of pixels is further organized into partitions, each partition having multiple pixels;
one or more of the partitions being mapped one or more of the member-pixels of the subset, respectively;
the processor is operable to read information from all member-pixels of the subset so as to generate a plurality of samples;
the processor further being operable to
handle the samples in a manner that preserves a relationship between each sample and corresponding member-pixel of the subset, and
read information from one or more of the partitions mapped to the member-pixels of the subset but not all of the partitions based upon the plurality of samples.

Serial No.: 10/648,445
Attorney Docket No.: 10018579-1

27. (Currently Amended) A digital camera comprising:
a pixel-differentiated image sensor for which selected ones of the entire set of pixels are individually addressable, the image sensor being organized into a matrix of partitions, each partition including a member-pixel of the subset referred to as a sampling pixel; and
a processor operable to
obtain sampling data from a sampling pixel without having to obtain information from the other pixels in the corresponding partition, and
selectively obtain data from at least the entire corresponding partition but fewer than all of the partitions depending upon the sampled-data without having to obtain information from all of the pixels on the image sensor; and
access a first set of sampling photo-sensing pixels of the image sensor and access a second set of non-sampling pixels of the image sensor, wherein the first and the second set of pixels have different physical circuitry addressing and control lines going to them, respectively.

28. (Original) The digital camera of claim 27, wherein the processor is operable to selectively obtain data from partitions located within a predetermined area adjacent to or surrounding the sampling pixel.